

**The Office Action**

The Office Action is discussed in detail below. Paragraph numbers refer to the paragraph numbers of the Office Action. Support for the amendments are found the specification as filed. No new matter has been added.

**Claim Objections****Paragraph 2 of Office Action**

Claims 23, 30 & 46 are objected to because of informalities.

Claims 23 & 46 have been amended for the purpose of correcting the informalities. With regards to claim 30, it is respectively noted that antecedent basis for "said nickel alloy" in lines 3-4 is provided in line 2 and no change to claim 30 is needed. Applicants respectfully request that the objections to claims 23, 30 & 46 be removed.

**Claim Rejections – 35 USC 102(b)****Paragraph 4 of Office Action**

Claims 1-7, 9-10, 15-17, 19-22, 27-28, 30-36, 42-44, 47-49 & 53-54 are rejected under 35 USC 102(b) as being anticipated by Michalko (U.S. Pat. 3,972,829).

Michalko discloses a catalyst having a nickel crystallite size of less than 25 Angstroms (see column 4, Example 1, lines 14-37). However, as discussed during the Interview of 6/26/02, Michalko fails to teach or suggest a metal particulate having a particle size of less than about 100 Angstroms as recited in applicants' claim 1.

Likewise, Michalko fails to teach or suggest a nickel and/or nickel alloy particulate having a particle size of less than about 100 Angstroms as recited in applicants' claim 30.

Hence, Michalko fails to teach or suggest all of the limitations of applicants' claimed invention as recited in applicants' claims 1 & 30. The rejection of claims 1 & 30 under 35 USC 102(b) as being anticipated by Michalko is improper and applicants respectfully request the rejection be removed.

Claims 2-7, 9-10, 15-17, 19-22 & 27-28 depend from claim 1 and include all of the limitations of claim 1 as well as additional limitations. Claims 31-36, 42-44, 47-49 & 53-54 depend from 30 and include all of the limitations of claim 30 as well as additional limitations. Hence, Michalko fails to teach or suggest all of the limitations of claims 2-7, 9-10, 15-17, 19-22, 27-28, 31-36, 42-44, 47-49 & 53-54. The rejection of claims 2-7, 9-10, 15-17, 19-22, 27-28, 31-36, 42-44, 47-49 & 53-54 under 35 USC 102(b) as being anticipated by Michalko is improper and applicants' respectfully request the rejection be removed.

Hence, the rejection of claims 1-7, 9-10, 15-17, 19-22, 27-28, 30-36, 42-44, 47-49 & 53-54 under 35 USC 102(b) as being anticipated by Michalko is improper and applicants' respectfully request the rejection be removed.

#### **Claim Rejections – 35 USC 103**

##### **Paragraph 6 of Office Action**

Claims 8 & 37 are rejected under 35 USC 103(a) as being unpatentable over Michalko (U.S. Pat. 3,972,829).

Claim 8 depends from claim 1 and includes all of the limitations of claim 1 as well as additional limitations. Claim 37 depends from claim 30 and includes all of the

limitations of claim 30 as well as additional limitations. As discussed, Michalko fails to teach or suggest all of the limitations of claims 1 & 30. Hence, Michalko fails to teach or suggest all of the limitations of claims 8 & 37. The rejection of claims 8 & 37 under 35 USC 103(a) as being unpatentable over Michalko is improper. Applicants' respectfully request that the rejection be removed.

**Paragraph 7 of Office Action**

**Claims 11-14 & 38-41 are rejected under 35 USC 103(a) as being unpatentable over Michalko (U.S. Pat. 3,972,829), as applied to claims 1-7, 9-10, 15-17, 19-22, 27-28, 30-36, 42-44 & 53-54 above, and further in view of Ovshinsky et al ("Ovshinsky"), (U.S. Pat. 5,840,440).**

Claims 11-14 depend from claim 1 and include all of the limitations of claim 1 as well as additional limitations. Claims 38-41 depend from claim 30 and include all of the limitations of claim 30 as well as additional limitations. As discussed, Michalko fails to teach or suggest all of the limitations of claims 1 & 30. Ovshinsky fails to make up for the deficiencies of Michalko, and the combination of Michalko in view of Ovshinsky fails to teach or suggest all of the limitations of claims 11-14 & 38-41. Hence, the rejection of claims 11-14 & 38-41 under 35 USC 103(a) as being unpatentable over Michalko in view of Ovshinsky is improper and applicants respectfully request it be removed.

**Paragraph 8 of Office Action**

**Claims 18, 24, 45 & 46 are rejected under 35 USC 103(a) as being unpatentable over Michalko (U.S. Pat. 3,972,829), as applied to claims 1-7, 9-10, 15-17, 19-22, 27-28, 30-36, 42-44, 47-49 & 53-54 above, and in further view of Flytani-Stephanopoulos et al ("Flytani-Stephanopoulos") U.S. Pat. 4,729,889.**

Claims 18 & 24 depend from claim 1 and include all of the limitations of claim 1 as well as additional limitations. Claims 45 & 46 depend from claim 30 and include all of the limitations of claim 30 as well as additional limitations. As discussed, Michalko fails to teach or suggest all of the limitations of claims 1 & 30. Flytani-Stephanopoulos fails to make up for the deficiencies of Michalko, and the combination of Michalko and Flytani-Stephanopoulos fails to teach or suggest all of the limitations of claims 18, 24, 45 & 46. Hence, the rejection of claims 18, 24, 45 & 46 under 35 USC 103(a) as being unpatentable over Michalko in view of Flytani-Stephanopoulos is improper and applicants respectfully request it be removed.

**Paragraph 9 of Office Action**

**Claims 23, 26, 50 & 52 are rejected under 35 USC 103(a) as being unpatentable over Michalko (U.S. Pat. 3,972,829), as applied to claims 1-7, 9-10, 15-17, 19-22, 27-28, 30-36, 42-44, 47-49 & 53-54 above, and in further view of Hatura et al "Hatura" (U.S. Pat. 5,506,273).**

Claims 23 & 26 depend from claim 1 and include all of the limitations of claim 1 as well as additional limitations. Claims 50 & 52 depend from claim 30 and include all of the limitations of claim 30 as well as additional limitations. As discussed, Michalko

fails to teach or suggest all of the limitations of claims 1 & 30. Hatura fails to make up for the deficiencies of Michalko, and the combination of Michalko in view of Hatura fails to teach or suggest all of the limitations of claims 23, 26, 50 & 52. Hence, the rejection of claims 23, 26, 50 & 52 under 35 USC 103(a) as being unpatentable over Michalko in view of Hatura is improper and applicants respectfully request that the rejection be removed.

**Paragraph 10 of Office Action**

Claims 25 & 51 are rejected under 35 USC 103(a) as being unpatentable over Michalko (U.S. Pat. 3,972,829), as applied to claims 1-7, 9-10, 15-17, 19-22, 27-28, 30-36, 42-44, 47-49 & 53-54 above, and in further view of Tsou et al "Tsou" (U.S. Pat. 5,171,644).

Claims 25 depends from claim 1 and include all of the limitations of claim 1 as well as additional limitations. Claim 51 depends from claim 30 and include all of the limitations of claim 30 as well as additional limitations. As discussed, Michalko fails to teach or suggest all of the limitations of claims 1 & 30. Tsou fails to make up for the deficiencies of Michalko, and the combination of Michalko in view of Tsou fails to teach or suggest all of the limitations of claims 25 & 51. Hence, the rejection of claims 25 & 51 under 35 USC 103(a) as being unpatentable over Michalko in view of Tsou is improper and applicants respectfully request that the rejection be removed.

**Claim Rejections – 35 USC 102(b)/103****Paragraph 12 of Office Action**

**Claims 29 & 55 are rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Michalko (U.S. Pat. 3, 972,829).**

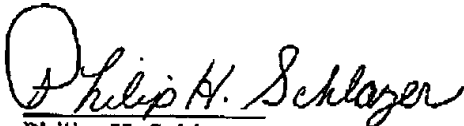
Claim 29 depends from claim 1 and includes all of the limitations of claim 1 as well as additional limitations. Claim 55 depends from claim 30 and includes all of the limitations of claim 30 as well as additional limitations. As discussed, Michalko fails to teach or suggest all of the limitations of claims 1 & 30. Hence, Michalko fails to teach or suggest all of the limitations of claims 29 & 55. The rejection of claims 29 & 55 under 35 USC 102(b) or, in the alternative, under 35 USC 103(a) is improper and applicants respectfully request that the rejection be removed.

Summary

In view of the above remarks and amendments, claims 1-55 are in condition for allowance. Applicants respectfully request reconsideration, withdrawal of the outstanding objections and rejections, and notification of allowance.

Should the Examiner have any questions or suggestions regarding the prosecution of this application, she is asked to contact applicants' representative at the telephone number listed below.

Respectfully submitted,



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4. (twice amended) The catalyst of claim 1, wherein said particulate has a particle size of between about 10 and about [50] 40 Angstroms.

23. (amended) The catalyst of claim 16, wherein said at least one metal oxide comprises fine-grained oxide and course-grained oxides.

46. (amended) The catalyst of claim 43, wherein said at least one metal oxide comprises an oxide of Mn[,] and Ni.

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